TAN X. DINH

Sat Jun 14 16:24:58 EDT 1997

P0001

14 JUN 1997 16:04:55

U.S. Patent & Trademark Office

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*********************************************************
*                                                       *
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TAN X. DINH Sat Jun 14 16:24:58 EDT 1997

* The files listed above are temporarily unavailable.14 JUN 1997 16:04:56
U.S. Patent & Trademark Office P0003

FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                                                         *
*             W E L C O M E   T O   T H E                 *
*          U. S.   P A T E N T   T E X T   F I L E        *
*                                                         *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

```
=> s target position or target track
        90482 TARGET
       1167457 POSITION
          2839 TARGET POSITION
               (TARGET(W)POSITION)
        90482 TARGET
       129903 TRACK
         1129 TARGET TRACK
               (TARGET(W)TRACK)
L1       3744 TARGET POSITION OR TARGET TRACK

=> s target address
        90482 TARGET
       108316 ADDRESS
L2        811 TARGET ADDRESS
               (TARGET(W)ADDRESS)

=> s l2 or l1
L3       4448 L2 OR L1

=> s radial? (2a) distan?
       366562 RADIAL?
       661277 DISTAN?
L4       20727 RADIAL? (2A) DISTAN?

=> s l4 and l3
L5         106 L4 AND L3

=> s velocity (a) trajector? or ( speed (2a) trajector? )
       171146 VELOCITY
        15502 TRAJECTOR?
          101 VELOCITY (A) TRAJECTOR?
       527610 SPEED
        15502 TRAJECTOR?
          241 SPEED (2A) TRAJECTOR?
L6        338 VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )

=> s l6 and l5
L7          2 L6 AND L5

=> d cit,ab 1-2

1.  5,576,909, Nov. 19, 1996, Method for positioning a data transducer head
in a rotating disk drive data storage device; Franz J. Dierkes, et al.,
360/78.09, 77.04, 78.06, 78.07 [IMAGE AVAILABLE]

US PAT NO:     5,576,909 [IMAGE AVAILABLE]                    L7: 1 of 2
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ABSTRACT:
A method of controlling track seeking and track following of a head in a disk file having servo information recorded thereon to provide a track number and a position error signal (PES). The physical parameters of the disk file are modeled by at least three sets of constants associated with selected numbers of tracks. An actuator is connected to the head by a support arm assembly and is responsive to a control signal for positioning the head. The method comprises, for each servo information sample, the steps of predicting a relative position, velocity, and bias of a data head. It is determined whether the predicted relative data head position corresponds to the selected number of tracks, if not, at least the predicted relative data head position is rescaled to form the predicted relative data head position to correspond to the selected number of tracks of the predicted data head position prior to rescaling. The set of the one of at least three sets of constants is changed to correspond to the selected number of tracks of the predicted data head position prior to rescaling. A measured relative data head position is formed from the track number, the PES and the **target track**. An error in a relative data head position is estimated. A control signal as a function of the relative position error, the predicted relative position, the predicted velocity, the predicted bias, and the adjusted velocity, of the data head, is generated.

2. 5,369,345, Nov. 29, 1994, Method and apparatus for adaptive control; Duc T. Phan, et al., 318/561; 360/77.04, 78.09 [IMAGE AVAILABLE]

US PAT NO: 5,369,345 [IMAGE AVAILABLE] L7: 2 of 2

ABSTRACT:
Methods and apparatus for controlling a plant are described. The control methods are adaptive and compensate for changes in plant component characteristics and plant environment, and are applicable to systems having a bias force. The methods are described in relation to a sampled-data control system for a computer disc drive servo actuator apparatus but the control methods are independent of plant type. Methods for extending a linear measurement range of a position sensor, for generating a plant gain constant, for measuring plant phase, for measuring plant resonance frequencies and compensating for the effects of plant resonance, and for switching between different modes depending on characteristics of the applied control value are described. These methods may be used separately or in combination to achieve the desired control.

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=> d his

(FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997)

SET PAGE SCROLL

L1 3744 S TARGET POSITION OR TARGET TRACK
L2 811 S TARGET ADDRESS
L3 4448 S L2 OR L1
L4 20727 S RADIAL? (2A) DISTAN?
L5 106 S L4 AND L3
L6 338 S VELOCITY (A) TRAJECTOR? OR (SPEED (2A) TRAJECTOR?)
L7 2 S L6 AND L5

=> s l6 and l3
L8 26 L6 AND L3

=> s l8 and (369/clas or 360/clas)
23802 369/CLAS
25582 360/CLAS
L9 13 L8 AND (369/CLAS OR 360/CLAS)

=> d 1-13

1. 5,585,976, Dec. 17, 1996, Digital sector servo incorporating repeatable run out tracking; Ich V. Pham, 360/77.04, 78.09 [IMAGE AVAILABLE]

2. 5,576,909, Nov. 19, 1996, Method for positioning a data transducer head in a rotating disk drive data storage device; Franz J. Dierkes, et al., 360/78.09, 77.04, 78.06, 78.07 [IMAGE AVAILABLE]

3. 5,497,360, Mar. 5, 1996, Optical disc apparatus with accessing using only reference velocity during acceleration and reference and moving velocities during deceleration; Tamane Takahara, et al., 369/44.28, 44.34, 54 [IMAGE AVAILABLE]

4. 5,469,414, Nov. 21, 1995, Positioning control system; Eiji Okamura, 369/32; 360/75, 78.05, 78.06, 78.09 [IMAGE AVAILABLE]

5. 5,396,379, Mar. 7, 1995, Apparatus and method for reducing effects of slip/stick in a disk drive head assembly; Mike J. Mayo, 360/78.07, 78.04, 78.06 [IMAGE AVAILABLE]

6. 5,381,282, Jan. 10, 1995, Inter-sample switching of servo control in direct access storage devices; Koichi Arai, et al., 360/78.07, 77.04, 78.06, 78.14 [IMAGE AVAILABLE]

7. 5,369,345, Nov. 29, 1994, Method and apparatus for adaptive control; Duc T. Phan, et al., 318/561; 360/77.04, 78.09 [IMAGE AVAILABLE]

8. 5,182,684, Jan. 26, 1993, Estimator positioning system and method; Vincent P. Thomas, et al., 360/78.09, 78.06, 78.08 [IMAGE AVAILABLE]

9. 5,119,250, Jun. 2, 1992, Method and apparatus for performing a seek; Martin R. Green, et al., 360/78.06; 318/561, 632; 360/78.04, 78.09 [IMAGE AVAILABLE]

10. 4,679,103, Jul. 7, 1987, Digital servo control system for a data recording disk file; Michael L. Workman, 360/78.07, 78.14 [IMAGE AVAILABLE]

11. 4,200,827, Apr. 29, 1980, Positioning system employing feedforward and feedback control; Richard K. Oswald, 318/561, 594, 616; 360/78.09 [IMAGE AVAILABLE]

12. 4,133,011, Jan. 2, 1979, Sampled data positioning system employing a model of the physical system for time optimal control; Fred Kurzweil, Jr., 360/78.09; 318/561, 638, 653; 360/78.06 [IMAGE AVAILABLE]

13. 4,030,132, Jun. 14, 1977, Dual mode velocity servo control for a linear actuator motor; Syed H. Iftikar, et al., 360/78.06; 318/617; 360/105 [IMAGE AVAILABLE]

=>

=> File JPoabs
FILE 'JPOABS' ENTERED AT 16:16:16 ON 14 JUN 1997

TAN X. DINH Sat Jun 14 16:24:58 EDT 1997

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* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*    J A P A N E S E   P A T E N T   A B S T R A C T S          *
*                                                               *
* CURRENTLY, DATA IS LOADED THROUGH THE ABSTRACT PUBLICATION    *
* DATE OF OCTOBER 1996.                                         *
* THE LATEST GROUPS RECEIVED ARE: PAJ545 & PAJ546.              *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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=> d his

(FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997)

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             SET PAGE SCROLL
L1         3744 S TARGET POSITION OR TARGET TRACK
L2          811 S TARGET ADDRESS
L3         4448 S L2 OR L1
L4        20727 S RADIAL? (2A) DISTAN?
L5          106 S L4 AND L3
L6          338 S VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )
L7            2 S L6 AND L5
L8           26 S L6 AND L3
L9           13 S L8 AND ( 369/CLAS OR 360/CLAS )
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FILE 'JPOABS' ENTERED AT 16:16:16 ON 14 JUN 1997

=> s l1 and l2

```
         47200 TARGET
        477290 POSITION
          2702 TARGET POSITION
                 (TARGET(W)POSITION)
         47200 TARGET
         36722 TRACK
           721 TARGET TRACK
                 (TARGET(W)TRACK)
         47200 TARGET
         84750 ADDRESS
           163 TARGET ADDRESS
                 (TARGET(W)ADDRESS)
L10         24 L1 AND L2
```

=> s l6

```
         23880 VELOCITY
           275 TRAJECTOR?
             0 VELOCITY (A) TRAJECTOR?
        314686 SPEED
           275 TRAJECTOR?
             1 SPEED (2A) TRAJECTOR?
L11          1 VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )
```

=> s l11 and l10

```
L12          0 L11 AND L10
```

=> d cit,ab l11

1. 04-184099, Jul. 1, 1992, METHOD FOR SETTING MISSILE TRAJECTORY; HIROAKI MISHINA, F41G 7/34

L11: 1 of 1

04-184099

ABSTRACT:

PURPOSE:To enable the most appropriate trajectory to be set up to a reaching point at a real time basis even during a flying of a missile by a method wherein a missile initial condition measured and a trajectory with a condition approximate to a target reaching point are selected from a plurality of predetermined reference missile trajectories and then an interpolation calculation is carried out.

CONSTITUTION:The most appropriate trajectory interpolation calculation part 4 in the most appropriate missile trajectory setting part 6 sets initial conditions (altitude, **trajectory** angle, **speed**)on the basis of a missile target data, selects more than two trajectories relatively approximating to the initial conditions and the target reaching point from a trajectory data memory 5 of the reference missile. It further selects more than two paths having short reaching time up to the target. As regards the selected reference missile trajectory data, each of the initial conditions and the target reaching point are compared with the initial conditions got through the missile target data and the target reaching point got by the target set data, an interpolation calculation is carried out and an actual most appropriate missile trajectory is calculated. The got most appropriate missile trajectory is inputted to a guiding calculation part 7 and the calculation part 7 perform a guiding of the missile.

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=> d his

     (FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997)

                SET PAGE SCROLL
L1          3744 S TARGET POSITION OR TARGET TRACK
L2           811 S TARGET ADDRESS
L3          4448 S L2 OR L1
L4         20727 S RADIAL? (2A) DISTAN?
L5           106 S L4 AND L3
L6           338 S VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )
L7             2 S L6 AND L5
L8            26 S L6 AND L3
L9            13 S L8 AND ( 369/CLAS OR 360/CLAS )

     FILE 'JPOABS' ENTERED AT 16:16:16 ON 14 JUN 1997

L10           24 S L1 AND L2
L11            1 S L6
L12            0 S L11 AND L10

=> s l10 and velocity
         23880 VELOCITY
L13          0 L10 AND VELOCITY

=> s l10 and speed
        314686 SPEED
L14         15 L10 AND SPEED

=> s l14 and trajector?
           275 TRAJECTOR?
L15          0 L14 AND TRAJECTOR?

=> s radial? (a) distan?
```

```
         40063 RADIAL?
        122732 DISTAN?
L16       137 RADIAL? (A) DISTAN?

=> s l16 and l14
L17         0 L16 AND L14

=> s initial position
         51962 INITIAL
        477290 POSITION
L18       3114 INITIAL POSITION
               (INITIAL(W)POSITION)

=> s l18 and l14
L19         0 L18 AND L14

=> s l18 and l10
L20         0 L18 AND L10

=> d his

     (FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997)

               SET PAGE SCROLL
L1         3744 S TARGET POSITION OR TARGET TRACK
L2          811 S TARGET ADDRESS
L3         4448 S L2 OR L1
L4        20727 S RADIAL? (2A) DISTAN?
L5          106 S L4 AND L3
L6          338 S VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )
L7            2 S L6 AND L5
L8           26 S L6 AND L3
L9           13 S L8 AND ( 369/CLAS OR 360/CLAS )

     FILE 'JPOABS' ENTERED AT 16:16:16 ON 14 JUN 1997

L10          24 S L1 AND L2
L11           1 S L6
L12           0 S L11 AND L10
L13           0 S L10 AND VELOCITY
L14          15 S L10 AND SPEED
L15           0 S L14 AND TRAJECTOR?
L16         137 S RADIAL? (A) DISTAN?
L17           0 S L16 AND L14
L18        3114 S INITIAL POSITION
L19           0 S L18 AND L14
L20           0 S L18 AND L10

=> s l1 or l2
         47200 TARGET
        477290 POSITION
          2702 TARGET POSITION
                 (TARGET(W)POSITION)
         47200 TARGET
         36722 TRACK
           721 TARGET TRACK
                 (TARGET(W)TRACK)
         47200 TARGET
         84750 ADDRESS
           163 TARGET ADDRESS
```

(TARGET(W)ADDRESS)

L21 3505 L1 OR L2

=> s l6
23880 VELOCITY
275 TRAJECTOR?
0 VELOCITY (A) TRAJECTOR?
314686 SPEED
275 TRAJECTOR?
1 SPEED (2A) TRAJECTOR?
L22 1 VELOCITY (A) TRAJECTOR? OR (SPEED (2A) TRAJECTOR?)

=> s l22 and l21
L23 0 L22 AND L21

=> s velocity and trajector?
23880 VELOCITY
275 TRAJECTOR?
L24 11 VELOCITY AND TRAJECTOR?

=> s l24 and l21
L25 0 L24 AND L21

=> s l21 and l16
L26 1 L21 AND L16

=> d cit,ab

1. 03-116472, May 17, 1991, DISK RECORD REPRODUCING DEVICE; KOICHI NOGUCHI, et al., G11B 19/247

L26: 1 of 1

03-116472

ABSTRACT:

PURPOSE:To obtain a disk record reproducing device with high-performance functions by utilizing the recording linear velocity of the data of a disk record or a value relating to the linear velocity.

CONSTITUTION:The table of correspondence between address performance time and the radius diameters of disk records which is stored in a ROM 214 is corrected with the actual linear velocity. For example, when an up UP key 135 is operated in manual play mode, searching operation which uses the address of the start part of next music as a **target address** is performed. A pickup 207 is moved in a radial direction of the disk record and data relating to the **radial distance** of the movement is read out of the table according to the current address to correct the distance with the actual linear velocity. Consequently, the accuracy of the searching operation is improved to make a fast search and higher performance of the device is obtained.l

=> d his

(FILE 'USPAT' ENTERED AT 16:04:56 ON 14 JUN 1997)

SET PAGE SCROLL
L1 3744 S TARGET POSITION OR TARGET TRACK
L2 811 S TARGET ADDRESS
L3 4448 S L2 OR L1

```
L4        20727 S RADIAL? (2A) DISTAN?
L5          106 S L4 AND L3
L6          338 S VELOCITY (A) TRAJECTOR? OR ( SPEED (2A) TRAJECTOR? )
L7            2 S L6 AND L5
L8           26 S L6 AND L3
L9           13 S L8 AND ( 369/CLAS OR 360/CLAS )

     FILE 'JPOABS' ENTERED AT 16:16:16 ON 14 JUN 1997

L10          24 S L1 AND L2
L11           1 S L6
L12           0 S L11 AND L10
L13           0 S L10 AND VELOCITY
L14          15 S L10 AND SPEED
L15           0 S L14 AND TRAJECTOR?
L16         137 S RADIAL? (A) DISTAN?
L17           0 S L16 AND L14
L18        3114 S INITIAL POSITION
L19           0 S L18 AND L14
L20           0 S L18 AND L10
L21        3505 S L1 OR L2
L22           1 S L6
L23           0 S L22 AND L21
L24          11 S VELOCITY AND TRAJECTOR?
L25           0 S L24 AND L21
L26           1 S L21 AND L16

=> s l21 and velocity
         23880 VELOCITY
L27        126 L21 AND VELOCITY

=> s l27 and l18
L28          3 L27 AND L18

=> d cit,ab 1-3

1.  04-54509, Feb. 21, 1992, AUTOMATIC POSITION CONTROLLER; RYOSAKU OBO, G05D
3/12

                                                          L28: 1 of 3

04-54509
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ABSTRACT:

PURPOSE:To reduce the production cost and to decrease the parameter adjustment items by outputting a **velocity** reference command signal to a drive system from the acceleration and deceleration reference signals produced based on the position and **initial position** deviations.

CONSTITUTION:A storage circuit 12 inputs a position deviation 4 between a **target position** 1 and a present position 2 of a control subject and stores the **initial position** deviation set at start of the control. An acceleration **velocity** reference circuit 11 produces an acceleration **velocity** reference signal from the deviation 4 and the **initial position** deviation. At the same time, a deceleration **velocity** reference circuit 10 produces a deceleration **velocity** reference signal from the deviation 4. Then the smaller one of both **velocity** reference signals is selected by a minimum value selection circuit 13 and a **velocity** reference command signal is outputted to a drive system. Thus a conventional ramp function generator can be omitted. As a result, the production cost of an automatic position

controller is reduced and the parameter adjustment items can be decreased.

2. 03-49082, Mar. 1, 1991, MAGNETIC DISK DEVICE; HIDEAKI FUJII, G11B 21/12

L28: 2 of 3

03-49082

ABSTRACT:

PURPOSE:To perform rerecording or re-reproducing without turning off a power source at the time of failing in positioning a magnetic head by letting a microcomputer execute a program for restoring the magnetic head to an **initial position** at the time of turning on the power source in the case of the magnetic head positioning through an actuator fails.

CONSTITUTION:The magnetic head 2 is controlled to move by the microcomputer CPU 8 through an actuator control circuit 7, etc., in accordance with the detection output of a rotating speed and position and **velocity** detecting circuit 6 to position the head 2 on a **target track**. In the case of failing in positioning, the CPU 8 executes the specified program in a ROM 9 so as to restore the head 2 to the **initial position** at the time of turning on the power source. As a result, a magnetic disk device in which the head is moved and rerecording or re-reproducing is performed without turning off the power source and whose throughput is high is obtained.o

3. 02-84398, Mar. 26, 1990, PLOTTER; MITSUAKI NAKAMURA, B43L 13/00

L28: 3 of 3

02-84398

ABSTRACT:

PURPOSE:To ensure that an analog waveform line to be drawn is drawn as s uniform line by a method wherein at the time of moving a printing head from one plotting point to the next, the head is once moved in the opposite direction to provide an approaching section, and then the head is moved at a fixed **velocity** between the plotting points.

CONSTITUTION:First, input signals are taken into a controlling circuit 13, and a **target position** X.sub.a for a head 8 and a feed quantity for a recording paper (p) are calculated. A motor 11 is rotated reversely, whereby the head 8 is moved reversely by an approaching section .DELTA.x. Immediately upon the reverse movement, the head 8 is started moving toward the **target position** X.sub.a. T
he approaching section .DELTA.x is so set that the head
8 started moving toward the **target position** X.sub.a can be moved at a fixed **velocity** after the time t* when the head 8 is passed again
through
its **initial position** X.sub.0. After the head 8 is passed through the **initial position** X.sub.0, the head 8 jets ink droplets toward the paper (p) at predetermined intervals, thereby plotting an analog waveform line. Because the head 8 is being moved at the fixed **velocity** at the time of plotting, the plotting density of the line is uniform over the entire length thereof, without any breakage or partial dot gaining.e

=> File uspat
FILE 'USPAT' ENTERED AT 16:24:47 ON 14 JUN 1997

* *
* W E L C O M E T O T H E *

* U. S. P A T E N T T E X T F I L E *

* *

=>

END OF JOB

User Name: TAN X. DINH

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Printer Id: wbbjptr

Job # 1993